THE CLAIMS:

Please amend the claims as shown below. The claims, as pending in the subject application, read as follows:

1. (Previously Presented) A method of automatically establishing a desired communication between an originating device and a target device, said originating device and said target device each having an associated profile, said method comprising the steps of:

(i) determining a profile compatibility between said originating device and said target device;

(ii) establishing said desired communication, if said profile compatibility between said originating device and said target device is not found, between said originating device and said target device by incorporating at least one additional device, said at least one additional device having an associated profile, said incorporation forming linked pairs of devices among said originating device, said target device and said at least one additional device; and

(iii) establishing said desired communication, if said profile compatibility between said originating device and said target device is found, between said originating device and said target device without incorporating said at least one additional device,

wherein said incorporation establishes a profile compatibility between each said linked pair of said devices; and

each of the steps (i), (ii), and (iii) is performed by at least one of the originating device, the target device, and the at least one additional device.

2. (Previously Presented) A method according to claim 1,wherein said incorporation comprises the steps of:

(a) communicating, by one of said originating device and said target device, to a first additional device, thereby forming linked pairs of devices among said originating device, said target device and said first additional device;

(b) establishing said desired communication, if a profile compatibility is found between each said linked pair of devices; and

(c) communicating, by one of said originating device, said target device and said first additional device, if said profile compatibility is not found between each said linked pair of devices, to a second additional device, thereby forming linked pairs of devices among said originating device, said target device, said first additional device, and said second additional device.

3. (Previously Presented) A method according to claim 1, wherein said incorporation comprises one of:

(x) forming a chain of devices commencing with said originating device, proceeding to each said at least one additional device in succession, and concluding with said target device; and

(y) forming a chain of devices commencing with said target device, proceeding to each said at least one additional device in succession, and concluding with said originating device.

4. (Original) A method according to claim 1 wherein each said device comprises one of a device or a service.

5. (Previously Presented) A method of establishing a desired communication between an originating entity and a target entity, each said entity being coupled to a communication network and having a corresponding profile related to information handled by said entity, said method comprising the steps of:

(i) determining a compatibility between the profile of said originating entity and the profile of said target entity;

(ii) if step (i) fails to find a profile compatibility between said originating entity and said target entity, establishing said desired communication between said originating entity and said target entity by interposing at least one additional entity between said originating entity and said target entity to form a chain of entities, each said additional entity having an associated profile, said interposing forming linked pairs between adjacent entities in said chain; and

(iii) if step (i) finds said profile compatibility between said originating entity and said target entity, establishing said desired communication between said originating entity and said target entity without interposing said at least one additional entity,

wherein said interposing establishes a profile compatibility between each said linked pair; and

each of the steps (i), (ii), and (iii) is performed by at least one of the originating entity, the target entity, and the at least one additional entity.

6. (Previously Presented) A method according to claim 5, wherein said interposing comprises one of:

(x) forming a chain of said entities commencing with said originating entity, proceeding to each said at least one additional entity in succession, and concluding with said target entity; and

(y) forming a chain of entities commencing with said target entity, proceeding to each said at least one additional entity in succession, and concluding with said originating entity.

7. (Currently Amended) A method of establishing a desired communication between an originating entity and a target entity, each said entity being

coupled to a communication network and having a corresponding profile related to information handled by said entity, said method comprising the steps of:

(i) determining a compatibility between the profile of said originating entity and the profile of said target entity;

(ii) if step (i) finds a direct profile compatibility between said originating entity and said target entity, establishing said desired communication directly between said originating entity and said target entity; and

(iii) if step (i) fails to find said direct profile compatibility between said originating entity and said target entity:

(a) specifying one of said originating entity and said target entity as a searching entity;

(b) searching said network by said searching entity to identify an additional entity coupled to said network and having a direct profile compatibility with said searching entity to thereby form a linked entity pair providing communications between said searching entity and said additional entity;

(c) specifying said additional entity as said searching entity;

(d) repeating steps (b) and (c) until the non-specified one of said originating entity and said target entity from step (a) is identified as said additional entity; and

(e) establishing said desired communication between said originating entity and said target entity via said linked entity pairs,

wherein each of the steps (i), (ii), and (iii) is performed by at least one of the originating entity, the target entity, and the at least one additional entity.

8. (Original) A method according to claim 7 wherein each said entity is selected from the group consisting of a device and a service.

9. (Previously Presented) A method of automatically establishing a process

between an originating device and a target device, each said device having an associated profile, said method comprising the steps of:

(i) determining a profile compatibility between said originating device and said target device;

(ii) establishing said process, if a profile compatibility between said originating and said target device is not found, between said originating device and said target device, by incorporating at least one additional device, said at least one additional device having an associated profile, said incorporation forming linked pairs of devices among said originating device, said target device and said at least one additional device, said incorporation establishing both a profile compatibility between each linked pair of said devices, and a compatible mapping of a message from said originating device to said target device; and

(iii) establishing said process, if said profile compatibility between said originating device and said target device is found, between said originating device and said target device without incorporating said at least one additional device, wherein said originating device communicates a message, using a message protocol, to said target device; wherein:

each of the steps (i), (ii), and (iii) is performed by at least one of the originating device, the target device, and the at least one additional device.

10. (Previously Presented) A method according to claim 9, wherein said incorporating comprises the sub-steps of:

(a) communicating, by one of said originating device and said target device, of said message and a first address, to a first additional device, thereby forming linked device pairs among said originating device, said target device and said first additional device, said communicating not requiring understanding by said communicating device of said message;

(b) establishing said process, dependent upon said message and said address, if direct profile compatibility is established between each linked pair of devices, wherein said compatible mapping of said message is established from said originating device to said target device;

(c) communicating, by one of said originating device, said target device and said first additional device, if said direct profile compatibility is not established between each linked pair of devices, of said message, said first address and a second address, to a second additional device, thereby forming linked device pairs among said originating device, said target device, said first additional device and said second additional device , said communicating not requiring understanding by said communicating device of said message; and

(d) repeating the steps (b) and (c) until said process is established, said direct profile compatibility being established between each linked pair of devices, and said compatible mapping of said message being established from said originating device to said target device.

11. (Previously Presented) A method according to claim 9, wherein said message comprises at least one of a command and a data value.

12. (Previously Presented) A method according to claim 9, wherein a message syntax used by a messaging protocol for said message conforms with Extended Markup Language (XML).

13. (Currently Amended) A method of establishing a process between an originating entity and a target entity, each said entity being coupled to a communication network and having a corresponding profile related to information handled by said entity, said method comprising the steps of:

(i) determining a compatibility between the profile of said originating entity and the profile of said target entity;

(ii) if step (i) finds a direct profile compatibility between said originating entity and said target entity, establishing said process directly between said originating entity and said target entity, wherein said originating entity communicates a message, using a messaging protocol, to said target entity, said process being dependent upon said message; and

(iii) if step (i) fails to find said direct profile compatibility between said originating entity and said target entity:

(a) specifying one of said originating entity and said target entity as a searching entity;

(b) searching said network by said searching entity to identify an additional entity coupled to said network and having a direct profile compatibility with said searching entity to thereby form a linked entity pair providing communications using said messaging protocol between said searching entity and said additional entity;

(c) specifying said additional entity as said searching entity;

(d) repeating steps (b) and (c) until the non-specified one of said originating entity and said target entity from step (a) is identified as said additional entity; and

(e) establishing said process between said originating entity and said target entity via said linked entity pairs to thereby establish said process and a compatible mapping of said message from said originating entity to said target entity,

wherein each of the steps (i), (ii), and (iii) is performed by at least one of the originating entity, the target entity, and the at least one additional entity.

14. (Original) A method according to claim 13 wherein said entities each comprise one of a device or a service.

15. (Previously Presented) A method according to claim 13, wherein said message comprises at least one of a command and a data value.

16. (Previously Presented) A method according to claim 13, wherein said messaging protocol is Extended Markup Language (XML).

17. (Currently Amended) A communication system comprising:

a communication network; and

a plurality of devices coupled to said network, each said device having associated therewith at least one service, each said service having a corresponding profile related to information handled by said service, each said service comprising:

means for determining a compatibility between the profile of said associated service and the profile of a further said service with which said associated service intends to communicate;

means for establishing communication between said associated service and said further service if a profile compatibility is found by said means for determining; and

means for searching said network to identify an intermediate service having a profile compatibility with said associated service and to establish communication between said associated service and said intermediate service to form linked pairs of services so that communication with further said service can be established.

18. to 36. (Canceled)

37. (Currently Amended) A computer readable medium comprising a computer program for establishing a desired communication between an originating entity and a target entity, each said entity being coupled to a communication network and having a corresponding profile related to information handled by said entity, said computer program comprising modules for performing a method comprising the steps of:

(i) determining a compatibility between the profile of said originating entity and the profile of said target entity;

(ii) if step (i) finds a direct profile compatibility between said originating entity and said target entity, establishing said desired communication directly between said originating entity and said target entity; and

(iii) if step (i) fails to find said direct profile compatibility between said originating entity and said target entity:

(a) specifying one of said originating entity and said target entity as a searching entity;

(b) searching said network by said searching entity to identify an additional entity coupled to said network and having a direct profile compatibility with said searching entity to thereby form a linked entity pair providing communications between said searching entity and said additional entity;

(c) specifying said additional entity as said searching entity;

(d) repeating steps (b) and (c) until the non-specified one of said originating entity and said target entity from step (a) is identified as said additional entity; and

(e) establishing said desired communication between said originating entity and said target entity via said linked entity pairs,

wherein each of the steps (i), (ii), and (iii) is performed by at least one of the originating entity, the target entity, and the at least one additional entity.

38. (Currently Amended) An apparatus for communicating with a target device or at least one additional device, comprising:

determining means for determining a profile compatibility between a profile of the apparatus and a profile of the target device;

first establishing means for establishing a communication between the apparatus and the target device, if the profile compatibility between the apparatus and the target device is found; and

second establishing means for establishing a communication between the apparatus and the at least one additional device to form at least one linked device pair, if the profile compatibility between the apparatus and the target device is not found,

wherein, if said second establishing means establishes the communication between the apparatus and the at least one additional device, a communication is established between the at least one additional device and the target device.

39. (Previously Presented) An apparatus according to claim 38, further comprising:

searching means for searching for at least one additional device whose profile is compatible with the profile of the apparatus,

wherein said second establishing means establishes the communication between the apparatus and the at least one additional device searched by said searching means.

40. (Previously Presented) An apparatus according to claim 38, further comprising:

requesting means for requesting the at least one additional device for format conversion of data from the target device,

wherein said second establishing means establishes the communication to receive the converted data from the at least one additional device.